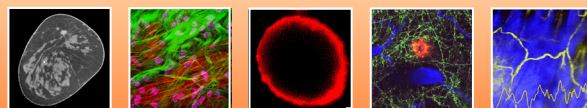


DIVISION OF INTERDISCIPLINARY TRAINING



National Institute of Biomedical Imaging and Bioengineering

National Institutes of Health

NIBIB Contact

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Introduction

The mission of the National Institute of Biomedical Imaging and Bioengineering (NIBIB) is to improve human health by leading the development and accelerating the application of biomedical technologies. The Institute is committed to integrating the physical and engineering sciences with the life sciences to advance basic research and medical care.

To attract and train bright and talented researchers, the NIBIB provides support in a broad range of training programs. These include disciplinary programs to support and bridge areas of NIBIB relevance, multidisciplinary programs to promote the clinical translation of emerging technology, and interdisciplinary programs to train a new cadre of researchers working at the intersection of the biological and physical sciences. These programs are designed to support researchers throughout the career continuum, increase the number of clinician-scientists, and enhance the participation of underrepresented populations in biomedical imaging and bioengineering research.

Undergraduate Training

- **Biomedical Engineering Summer Internship Program (BESIP)** provides undergraduate biomedical engineering students the opportunity to participate in cutting-edge biomedical research projects at NIH intramural laboratories.
- **Team-Based Design in Biomedical Engineering (R25) Awards** provide support for new or existing design courses in which undergraduate students work in teams on open-ended biomedical design projects.
- **DEsign by Biomedical Undergraduate Teams (DEBUT) Challenge** awards \$45,000 in prizes to teams of undergraduate students working on projects offering innovative solutions to unmet clinical and health problems.
- **Expanding Diversity in Engineering and the Physical Sciences Program** supports mentoring, research, and professional development activities that attract and retain underrepresented undergraduates in STEM fields.

Pre and Post Doctoral Training

Ruth L. Kirschstein National Research Service Awards support predoctoral students working toward research degrees and postdoctoral fellows pursuing research in mentors' laboratories.

- **T32 – Institutional Research Training** Awards support focused predoctoral and postdoctoral research training programs in biomedical engineering for graduate students, postdoctoral fellows, and radiology residents, as well as broad based multidisciplinary and interdisciplinary research training integrating engineering with the biological, computational, and physical sciences.

- **T35 – Short-Term Institutional Research Training Awards** support short-term clinical or translational research experiences for biomedical engineering graduate students.
- **F30 – Individual Predoctoral MD/PhD or Other Dual-Doctoral Degree Fellowships** provide support for the integrated research and clinical training of promising predoctoral students who are matriculated in a dual-doctoral degree training program.
- **F31 – Individual Predoctoral Fellowships** offer support to outstanding doctoral candidates undertaking training in bioengineering and biomedical imaging.
- **F31 – Individual Predoctoral Fellowships to Promote Diversity in Health-Related Research** offer up to two years of doctoral training support to individuals from underrepresented racial and ethnic groups, persons with disabilities, and those from disadvantaged backgrounds.
- **F32 – Individual Postdoctoral Fellowships** provide postdoctoral training support for qualified individuals who have received the Ph.D. (or equivalent) degree.

Career Development Awards

Career development awards provide salary and laboratory support for postdoctoral fellows transitioning to faculty positions and junior faculty who are changing research fields or need protected research time during critical periods of their careers.

Transitional Career Development

- **Pathway to Independence (K99/R00) Awards** offer funding for both mentored training (K99) and independent research (R00), shortening the time between postdoctoral training and research independence.

Basic Career Development

- **K01 – Mentored Research Scientist Development Awards** provide basic researchers who wish to obtain experience in an area different from their doctoral or postdoctoral research focus up to four years of mentored research support as they transition to research independence.
- **K25 – Mentored Quantitative Research Career Development Awards** provide up to four years of mentored research support to individuals with quantitative backgrounds but little experience in biology or medicine who wish to refocus their research on biomedical research.

Clinical Career Development

- **K08 – Mentored Clinical Scientist Development Awards** offer clinician-scientists up to four years of mentored research support as they transition to research independence.
- **K23 – Mentored Patient-Oriented Research Career Development Awards** provide clinically trained professionals with up to four years of mentored patient-oriented research support as they transition to research independence.

Conference/Meeting Awards (R13)

R13 Awards help support national conferences and meetings that significantly impact the scientific fields relevant to the NIBIB mission. Priority is given to applications that encourage the participation of students, fellows, and junior faculty, especially members of underrepresented groups.

Academic Research Enhancement Awards (AREA – R15)

AREA Awards provide up to three years of support for biomedical research conducted by faculty and students at academic institutions that have not been major recipients of NIH research awards. Institutional eligibility can be verified at <http://grants.nih.gov/grants/funding/area.htm>

Research Education Programs (R25)

- **Team-Based Design in Biomedical Engineering** – see Undergraduate Training
- **NIBIB Summer Research Experience Program** supports summer research experiences that enhance the communication and research skills of high school science teachers and community college STEM faculty.
- **NIBIB Research Education Programs** for Residents and Clinical Fellows provide one or two years of salary and laboratory support for residents from radiology and other NIBIB-relevant residency programs.

Research Supplements

- **Research Supplements to Promote Diversity in Health-Related Research Awards** support individuals from underrepresented racial and ethnic groups, persons with disabilities, and those from disadvantaged backgrounds.
- **Research Supplements for Career Reentry Awards** enable talented fellows and early-career faculty with high research potential to reenter an active research career after a qualifying interruption for family or other responsibilities.

NIH Blueprint for Neuroscience

Enhancing Neuroscience Diversity through Undergraduate Research Education (ENDURE) funds collaborative neuroscience research partnerships between undergraduate institutions and graduate neuroscience research training programs.

Additional information at <http://neuroscienceblueprint.nih.gov>.

NIH Common Fund (Roadmap)

NIH Director's Early Independence Awards allow exceptional early-career researchers to omit postdoctoral training and establish independent research programs.

NIH Director's New Innovator Awards support innovative proposals from early-career researchers with the potential for high impact on biomedical research.

Additional information at <http://commonfund.nih.gov>.

Big Data to Knowledge (BD2K)

BD2K is a trans-NIH initiative established to enable biomedical research as a digital research enterprise, to facilitate discovery and support new knowledge, and to maximize community engagement. The following funding opportunities are offered in support of 4 major aims: 1) to facilitate broad use of biomedical digital assets by making them discoverable, accessible, and citable, 2) to conduct research and develop the methods, software, and tools needed to analyze biomedical Big Data, 3) to enhance training in the development and use of methods and tools necessary for biomedical Big Data science, and 4) to support a data ecosystem that accelerates discovery as part of a digital enterprise.

- Predoctoral Training in Biomedical Big Data Science (T32)
- Mentored Career Development Award in Biomedical Big Data Science for Clinicians and Doctorally Prepared Scientists (K01)
- Revisions to Add Biomedical Big Data Training to Active Institutional Training Grants (T32)
- Courses for Skills Development in Biomedical Big Data Science (R25)
- Open Educational Resources for Biomedical Big Data (R25)

Additional information at: <http://bd2k.nih.gov>

NIBIB Contacts

Please contact the following program staff with questions about the above programs. We welcome the opportunity to speak with potential applicants about our training programs.

More information at <http://www.nibib.nih.gov/Training>

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